

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claims 1-2 are canceled.

Claim 3. (New) An apparatus having a refrigeration cycle, comprising:

a shell forming a closed space;

a compressor located within the shell;

an induction motor having a rotor and a stator having a plurality of stator poles with stator windings associated with each stator pole, the motor being coupled to compressor to drive the compressor;

wherein the rotor is located within the shell, and the shell is welded to the stator poles such that a portion of each stator pole is located within the shell and the stator windings are located outside the shell.

Claim 4. (New) The apparatus of claim 3, wherein the portion of the shell welded to the stator poles is composed of non-magnetic material.

Claim 5. (New) The apparatus of claim 3, wherein the portion of the shell welded to the stator poles is composed of diamagnetic material.

Claim 6. (New) The apparatus of claim 3, wherein the stator poles are laminated structures, and the laminated structures of each stator pole are welded together to prevent a refrigerant gas from leaking between the laminated structures of each stator pole.

Claim 7. (New) The apparatus of claim 3, wherein each stator pole includes a small gap such that the portions of the stator poles outside the shell may be removed from the motor.

Claim 8. (New) An induction motor system, comprising:

a shell;

an induction motor having a rotor and a stator having a plurality of stator poles with stator windings associated with each stator pole;

wherein the rotor is located within the shell, and a first portion of the stator poles is located within the shell, and a second portion of the stator poles are located outside the shell such that the stator windings are located outside the shell.

Claim 9. (New) The induction motor system of claim 8, further comprising a compressor located within the shell and coupled to the rotor, wherein the shell forms a closed space for a hermetic system.

Claim 10. (New) The induction motor system of claim 8, wherein the shell includes non-magnetic material.

Claim 11. (New) The induction motor system of claim 8, wherein the shell includes diamagnetic material.

Claim 12. (New) The induction motor system of claim 8, wherein the stator poles are laminated structures, and the laminated structures of each stator pole are welded together to prevent a gas from leaking between the laminated structures of each stator pole.

Claim 13. (New) The induction motor system of claim 8, wherein each stator pole includes a small gap such that the portions of the stator poles outside the shell may be removed from the motor system.

Claim 14. (New) A method of constructing an induction motor system, comprising the steps of:

forming a shell around the rotor of an induction motor;

welding the shell to the stator poles for a stator of the induction motor, wherein a portion of the stator poles are located inside the shell, the stator windings associated with each stator pole are located outside the shell.

Claim 15. (New) The method of claim 14, further comprising the step of coupling the rotor of the motor to a compressor, wherein the shell forms a closed space for a hermetic system, and the motor and compressor are located within the shell.

Claim 16. (New) The method of claim 14, wherein the step of forming the shell further includes the step of fabricating the shell from a non-magnetic material.

Claim 17. (New) The method of claim 14, wherein the step of forming the shell further includes the step of fabricating the shell from a diamagnetic material.

Claim 18. (New) The method of claim 14, wherein the stator poles are laminated structures, and further comprising the step of welding the laminated structures of each stator pole together to prevent a gas from leaking between the laminated structures of each stator pole.

Claim 19. (New) The method of claim 14, further comprising the step of cutting each stator pole to form a small gap such that the portions of the stator poles outside the shell may be removed from the motor.